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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/938,507 | 08/27/2001 | Won-Keun Kong | Q64305 | 2898 |
| 7590 | 03/29/2005 | | EXAMINER | |
| SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W., Suite 800 Washington, DC 20037-3213 | | | | HEINRICH, CHRISTOPHER P |
| | | ART UNIT | PAPER NUMBER | |
| | | 2663 | | |

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------------------------|------------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/938,507 | KONG, WON-KEUN <i>(K)</i> |
| | Examiner Christopher P. Heinrichs | Art Unit 2663 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 8/27/2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-9 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 27 August 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Drawings

1. Figures 1, 2, and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because figure 2, item 12 reads "NETWORK NDOE" and should read "NETWORK NODE". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 5, 7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent #6,829,239 to Bhatia et al.

5. With regard to claim 1, Bhatia discloses a network address conversion system (LAN modem, fig 3 item 300) comprising a reservation unit (fig 3, item 330, refer to fig 5, item 520 and brief description of fig 5) for receiving an access reservation demand (return packets, col 17 lines 27-31) from an external node (fig 5, item 510) to access a

specific node (fig 5 item 504a) of a private network (fig 5 item 502), an external port allocation unit (CPU, fig 3 item 330, refer to fig 7 and brief description of fig 7) for allocating a first external port value (5002) to the specific node and transmitting the first external port value to the external node (col 16 lines 45-47, refer to fig 7 where specific node is workstation 121.164.1.2 of Table 1 and fig. 5), a mapping table for storing the first external port value (fig 9 and fig 5 item 435), and an address conversion unit (CPU, fig 3 item 330, refer to fig 5 and col 17, lines 20-26 and Table 1, Case III and Case IV).

6. With regard to claim 3, Bhatia discloses the system of claim 1 and further teaches the specific node of the private network includes the private IP address (fig 5, item 504a, address is 121.164.1.2) and an internal port value (refer to Table 1, column heading "Source Port No. 608"), first item atop column).

7. Claims 5 and 7 consist of method steps performed by the system of claims 1 and 3, respectively. They are therefore rejected on the same grounds.

8. With regard to claim 9, Bhatia discloses in col 7 lines 40-46 that the process and modules (method) of his invention are stored in non-volatile memory for execution by a CPU to carry out the method of claim 9 which has been rejected as set forth above.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 2, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,829,239 to Bhatia et al. in view of U.S Patent #6,128,298 to Wootton et al.

12. With regard to claim 2, Bhatia discloses all aspects of the claimed invention as set forth in the rejection of claim 1. The system as described above includes a reservation unit and a mapping table but fails to explicitly teach functionality to delete the first external port value from the mapping table in response to the cancel demand. However, Wootton discloses a mapping table (lookup table, col 3 lines 10-15) and the functionality of deleting, when receiving an access reservation cancel demand (zeroing upon detection of an end of transmission code in the packet, col. 3, lines 20-22) the first external port value (lookup table entry, col. 3. line 21, and private network's port number, col. 3, lines 14-15) allocated to the specific node. Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the invention to use the deletion functionality disclosed by Wootton in conjunction with the mapping table of the system disclosed by Bhatia to effect efficient use of a network address conversion

system's resources. The motivation for doing so would have been when the external node indicates that it no longer desires the connection to the internal node, and the stored information is no longer necessary or relevant, the implementation of the deletion functionality would remove the stored information to allow room in the table for other information.

13. Claims 6 consists of a method for which all constituent steps are performed by the system disclosed by Bhatia in view of Wootton in claims 2, and is therefore rejected on the same grounds.

14. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,829,239 to Bhatia et al. in view of U.S. Patent #6,760,780 to Chitturi. Bhatia discloses the network address conversion system of claim 1 and the public IP address of the external node (fig 5 item 510) but does not disclose allocation of a second (or more) port for use by the external node. Chitturi, however, discloses a node on a private network with a private IP address (fig. 2, item 104) and communication between the public node and the private node through a proxy. The communication, which is illustrated by fig. 12 and col. 13, lines 8-12, shows the external node using 2 ports, an audio port 1400 and a video port 1500 which, in this case, is the second port the external network node includes. It would have been obvious to one ordinarily skilled in the art at the time of the invention to include in the functionality of the network address conversion system taught by Bhatia the external network node having a public

IP address (as the external network node of Molitor resides in an address realm outside of the address realm of the internal node (Molitor, col. 11 lines 35-36)). The motivation for doing so would have been to allow the external network node to use two or more ports for communicating with an internal node, as is typically done in modern multimedia communication.

15. Claim 8 claims a method for which all constituent steps are performed by the system disclosed by Bhatia in view of Chitturi in claim 4, and is therefore rejected on the same grounds.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Heinrichs whose telephone number is 571-272-8397. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CH
C. Heinrichs
A.U. 2663

Ricky Ngo
RICKY NGO
PRIMARY EXAMINER

3/21/05